

A *Art 24*
T R E A T I S E
O N
S K A T I N G;

Founded on certain Principles deduced
from many Years Experience:

B Y W H I C H

That noble Exercife is now reduced to an
Art, and may be taught and learned by a
regular Method, with both Eafe and Safety.

The Whole illuftrated with Copper-plates, representing
the Attitudes and Graces.

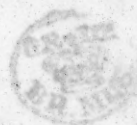
By R. J O N E S,
Lieutenant of Artillery. *K*

— They fweep,
On founding Skates, a thoufand different ways,
In circling poize, fwift as the winds.

THOMSON.

L O N D O N,
Printed for the AUTHOR:
And fold by J. RIDLEY, in St. James's Street.
MDCCLXXII.

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T O

THE RIGHT HONOURABLE
LORD SPENCER HAMILTON.

MY LORD,

NO one, who has had the pleasure of seeing your Lordship upon the ice, will ask why I was ambitious to prefix your name to the following Treatise. — I have often considered it as a blunder in many of our best authors, that they have dedicated their works to men, who, though conspicuous for their rank and fortunes, were however wholly unacquainted with the subjects which were in this manner put under their protection. — If any one

A 2 should

should affect to despise the reputation of excelling in this amusement; I would wish them to consider, that merit is due to excellence of every kind; that the antients paid the highest regard to all those exercises which contributed to strength and activity; the faculties of the mind generally improving with those of the body. — Could we trace all great men through every period of their lives, we should find in the early part of them, that they discovered in their juvenile diversions the sparks of those qualities for which they became eminent when called to more serious and important occupations. Cæsar, or Alexander, would have dreaded as much, when they were boys, to have been outdone in swimming, running, or leaping, &c. as they would afterwards the loss of a battle; and whenever you, my Lord,

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shall

[v]
shall be called forth to those employ-
ments which your birth and abilities
demand, I may venture to prophecy
that you will appear as remarkable
in the execution of them, as you are
now for every elegant and genteel ac-
complishment.

I have the honour to subscribe
myself,

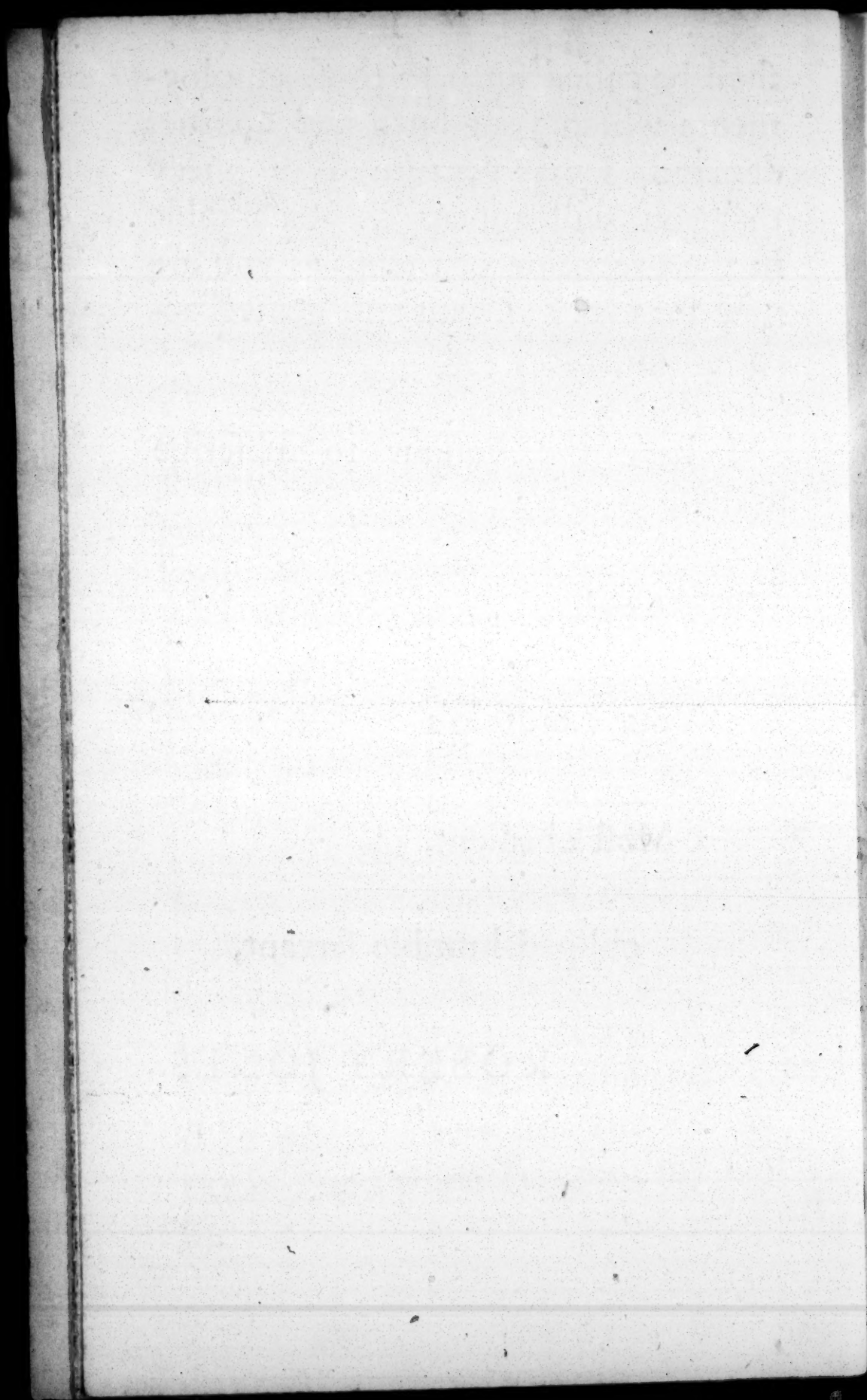
My Lord,

Your Lordship's

Most obedient,

obliged humble servant,

ROBERT JONES.



P R E F A C E.

WE have the happiness of living in so enlightened an age, that every thing is now reduced to a system. Essays and treatises have been written upon every art, from Machiavel on Government, down to the ingenious Mr. Savigny upon the use of the Razor. I mean not, by this expression, to depreciate the latter of these writers ; for, if the merit of any composition is to be estimated by the benefit which mankind in general receive from it, there is no one but will prefer the writings of our countryman to those of the Italian. I own, that in this present treatise I labour under one difficulty, which is, that of not being able, like most modern authors, to trace my subject back

to former ages, and illustrate it with quotations from the Greek and Roman authors : but if there should be any of my readers so much in love with antiquity, as to relish nothing but what was practised by our forefathers, I have it very luckily in my power to gratify them, by an extract from the works of Fitzstephen, a Monk in Henry the Second's time. " When (says " he) that great moor which washed " Moorfields, at the North Wall of " the city, is frozen over, great " companies of young men go to " sport upon the ice, and bind to " their shoes bones, as the legs of " some beasts ; and hold ~~skates~~ in *staples* " their hands, headed with sharp iron, " which sometimes they stick against " the ice ; and these men go on with " speed, as doth a bird in the air, or " darts shot from some warlike engine ; sometimes two men set themselves at a distance, and run one " against

“ against another, as it were at tilt,
“ with these ~~skates~~; wherewith one *Ha*
“ or both parties are thrown down,
“ not without some hurt to their
“ bodies ; and after their fall, by rea-
“ son of their violent motion, are
“ carried a good distance one from
“ another ; and wheresoever the ice
“ doth touch their heads, it rubs off
“ the skin, and lays it bare ; and if
“ one fall upon his leg or arm, it is
“ usually broken ; but young men,
“ being greedy of honour, and desi-
“ rous of victory, do thus exercise
“ themselves in counterfeit battles that
“ they may bear the brunt more
“ strongly when they come to it in
“ good earnest.”

La And even so early as in the fifteenth century, we may find that this art arrived to some degree of perfection in Holland, from the manner in which it is mentioned by Tasso,

Sì come fogloin là vicino el polo,
S'avien, che'l verno i fiumi agghiacci
e indure,
Correr fei'l ren le villanelle à stuolo
Con lunghi strisci, e sdrucciolar fe-
cure.

Gierusalemme liberata, canto 14.

It may be no small recommendation of skating, that it is practised in those seasons, when scarce any other exercise out of doors can be used with safety: but, besides this, nothing can be imagined more conducive to the health or spirits; and I am sure from experience it is an excellent preservative against the gout, a circumstance which I am surprized has escaped the notice of Doctor Cadogan: I hope he will do me the justice of mentioning it in his next edition.

It

It has been suggested to me, that, in the present age, those diversions only meet with approbation, which bring the sexes most effectually together; and skating is calculated only for the male part of our species. This objection would have some weight, were it true: but, for my own part, I see no reason why the ladies are to be excluded; to object to it as not being hitherto practised, is the effect of prejudice and confined ideas: the same spirit which established the Coterie may make this as fashionable a diversion for one sex as the other. No motion can be more happily imagined for setting off an elegant figure to advantage; nor does the minuet itself afford half the opportunity of displaying a pretty foot: a lady may indulge herself here in a *tête à tête* with an acquaintance, without provoking the jealousy of her husband;

3

and

and should she unfortunately make a slip, it would at least not be attended with any prejudice to her reputation.

CON-

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SKATES

SKATES may be had, after the
Author's Plan, at RICCARD's
Manufactory, at the Corner of
Orange Court, next the *Mews*
Gate, Castle Street.

E R R A T A.

Page 2, Line 12, *for* thread, *read* tread, to fit, &c.

5, ——— 2, *for* that motion, *read* that the motion.

8, ——— 13, *for* that is, *read* that it is.

15, ——— 12, *for* on, *read* of.

Ibid. --- 18, *for* shall dispense, *read* may be dispensed.

A T R E A-



A T R E A T I S E
O N
S K A T I N G.



S E C T I O N I.

Of the different Methods of fixing on Skates.

VARIOUS methods have been made use of, to fasten on the skates; some have done this by means of a strong tape put through the holes in the front of the skate, which is then tied across the toes, and from thence being carried through the rings in the heel strap, is brought back again, and tightly fastened by a knot,

B

over

over the instep; some have their shoes screwed to the stocks of skates; others have them fastened to plates of brass, which are fixed to the skate irons, instead of wooden stocks: there is also another method practised by many, which is, the having a piece of plate iron fixed across the stock at the heel, and a piece of the same sort on the tread, these pieces of iron have their ends turned up; that on the tread: to fit over the edges of the shoe soles; and the other over the heel, to which the iron is screwed on both sides.

The method which is taken by the common people is so well known, as not to need any particular description; they only make use of buckles, straps, rings, and heel pegs*; which

* Quadrilateral pyramids of iron, about three quarters of an inch in length, joining to the head of the heel screws.

method may be well enough for those who continue this diversion for a few minutes at a time, and think skating consists in an awkward shuffling over the ice, for ten or a dozen yards, for they seldom or ever are able to go any greater length without falling, or at least being obliged to stop to re-tighten their skates, which by this method of fastening are continually getting loose: as they are prevented from slipping behind, by means of the heel pegs before-mentioned, so they endeavour to keep them steady at the toe, by means of small pieces of iron, so sharply/pointed as to enter easily into the sole of the shoe. I have made repeated trials of all the above methods of fastening the skate, but have found none of them succeed to my satisfaction; and I think the reasons why they do not are pretty obvious. Tape never can be made a proper fastening;

ing; as it is liable to stretch, the knot tied with it must be continually growing slack: to obviate this defect, it is stretched to the utmost tightness it will bear, so that the blood vessels and tendons of the feet are so violently pressed, that a numbness, or cramp, is in general the consequence; another objection to tape is, that, by its fretting against the soles of the shoes, it oftentimes breaks on a sudden, which accident if it should happen to a person skating with any degree of velocity, the consequence may be fatal.

When the shoes are screwed to the stocks, as mentioned in the second method, the skates have no proper play; for, unless the shoes be large, the ankles will run great risk of being sprained by the sudden jirks of the skates, which often happens in going over rough ice; if the shoes
be

be too large, the feet will then have so much play, that motion must be irregular and uneasy.

As to the third method, where the stocks are made of brass, the same objection will lye as to the second; and they will have this defect, that the stocks may be easily broken.

In the last method, we find the skates are screwed by pieces of iron being fixed across the stocks, which produces almost the same bad effects as screwing on the shoes: this method is likewise very dangerous; for, on any extraordinary inclination of the body sideways, the iron on the tread may touch the ice, and, by not being pliable, prevent the shoe from bending, and throw the skate off its edge; or, by sticking in the ice, be forced either from the stock or from the shoe.

The method of fastening on skates, with straps at the toes and heels, has long been approved of, by most skaters who have not arrived to great perfection ; it is certainly the best method yet known, for plain skating and travelling, because the skates and feet have sufficient play, and are no ways constrained. The reason why this method is only fit for plain skating, and travelling, is on account of the following defect, namely, that in any other sort of skating, where sudden and irregular motions are made use of, the peg will come out of the heel of the shoe, and cause a fall.

All the preceding methods being defective in some particular or other ; I shall now give one both safe and simple, which I have practised for many years, without the least inconvenience.

conveniency. My method is this: Let the skates be prepared with toe and heel straps, as usual; but instead of heel pegs, let the heel screws be made with flat heads, and long enough to go through the heels of the shoes, in which holes must be bored, and the heads of the screws sunk even with the leather, to prevent hurting the feet; to guard against which more effectually, let a piece of leather be sewed to the quarter of the shoe, large enough to cover the whole heel, which will defend it sufficiently from the screw.

The reader will easily conceive what advantage this method has over all those before mentioned, from the following observations: First, by the screw going through the lifts of the heel, the skate is prevented from altering its position in that part; secondly, when those sort of heel screws

are used, the straps are not required to be drawn so tight as to give pain to the feet: I have made, it is true, an objection before, to fastening the shoe to the skates without straps; but this method of screwing them at the heel has by no means the same bad effect; for, the screws being in the centre, and the leather pliable, the shoes have their liberty at the sides. I have found by experience, that the skate must not be confined at the toes, and yet that is necessary to prevent it there also from slipping. The points of iron on the tread are continued for that purpose.

Of the Construction of Skates.

I will venture to say, those who have skated in England and in Holland, or have made use of English and Dutch skates, will give the preference to those made after the English fashion; not that it is fair to condemn the construction of Dutch skates, as that nation makes use of them chiefly for travelling; and here indeed they exceed ours; for, by reason of their great length, flat and broad surface, they run over rough ice with ease and expedition; their irons are likewise made low, consequently not so heavy as the English: ours would by no means be proper for travelling, because the irons are short and circular; not above two inches of their surface touch the ice at a time; all our attention is required, to keep the body

I in

in an equilibrium on so small a base, which would be almost impossible to continue for any length of time; and the weight of the irons would add to the fatigue.

The Dutch, finding by experience that the length and straightness of their skate irons increased the friction upon the ice, have of late years made them shorter and more curved. Skating among the Dutch, is not so much an exercise or diversion, as business and necessity; the nature of their country and the continuance of their frosts make it so; consequently, safety and expedition is all they have to consider; and I have before shewn that this is sufficiently attended to, in the formation of their skates. In England, the case is different; skating is used here as an exercise and diversion only; hence

an easy movement and graceful attitude are the sole objects of our attention. To arrive at these, nothing can be better imagined than the present form of our skates.

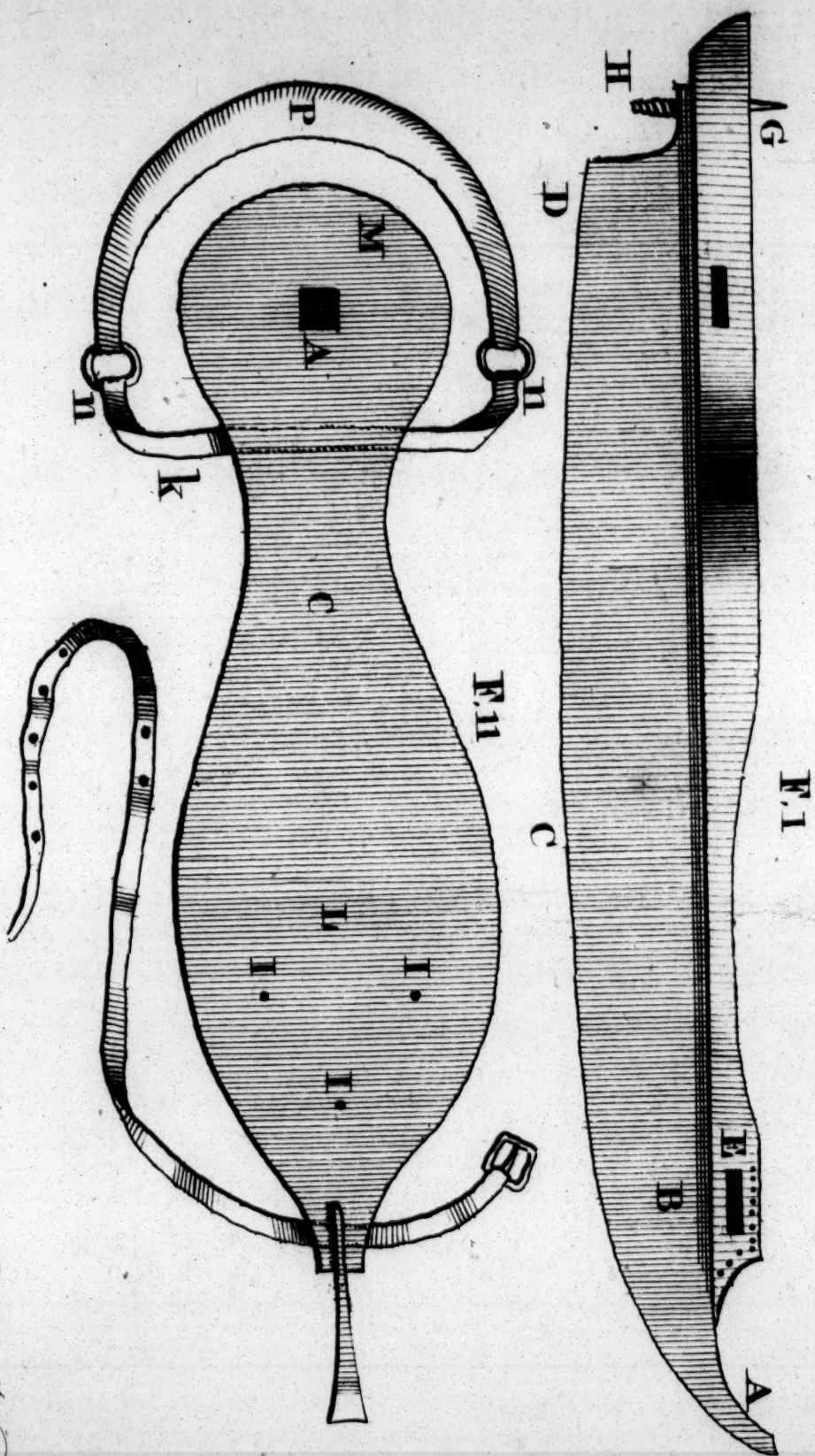
The reason we differ from them in the make of our skates is, that most of the graceful attitudes and movements are performed on the outside edges, with variety of curved lines; some of which being made infinitely short, if the irons were not of a circular form, it would be impossible to turn in so small a space: as this circular form accelerated the motion, and was the first improvement on Dutch skates, so the lowness of the iron was soon found to be an hindrance to a proper inclination of the body. Hence their height was increased, which alteration answered extremely well, particularly in assisting the long roll,
which

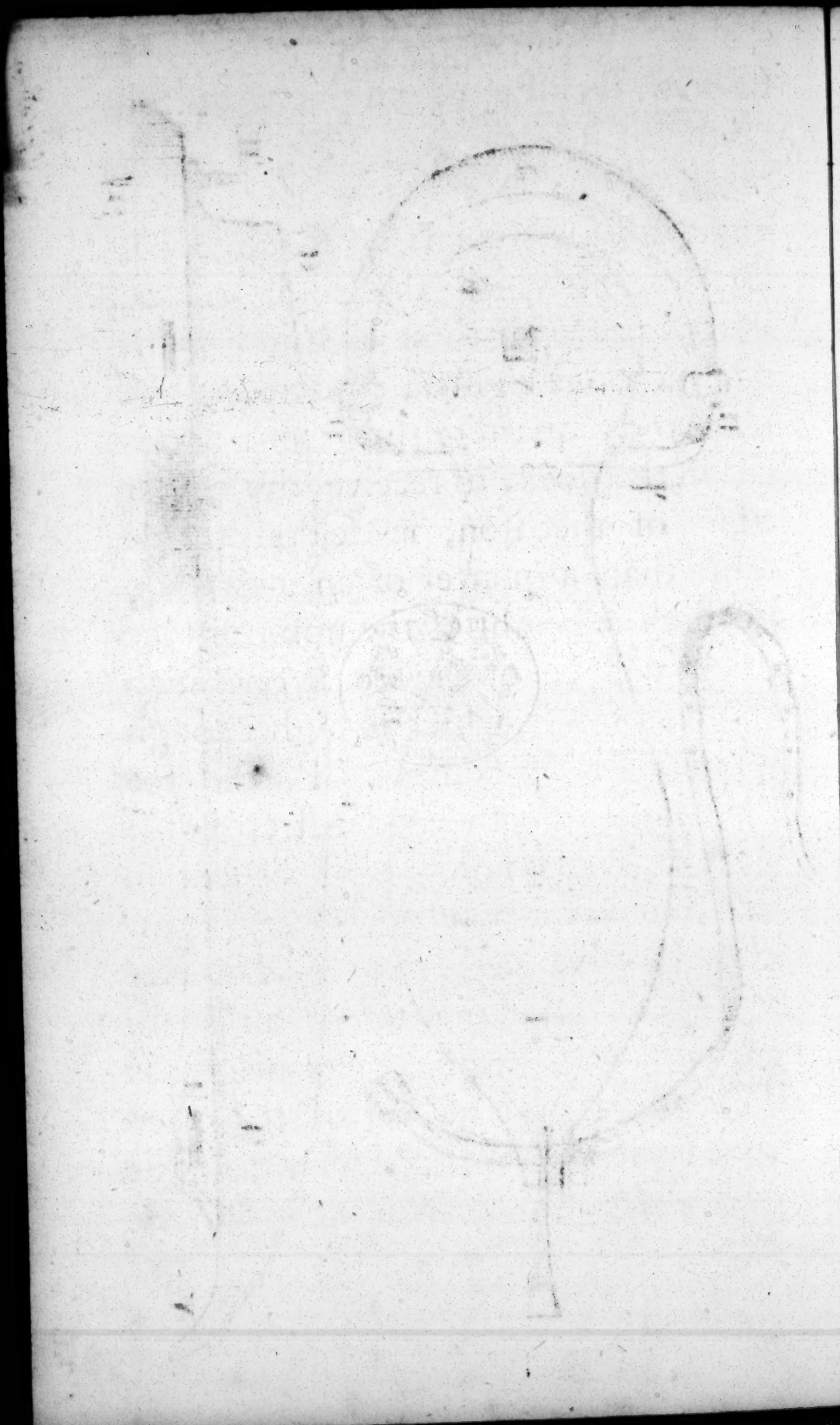
which before could not be done in a proper and becoming position.

These amendments and alterations being made with so much success, many others soon followed, which would be difficult and tedious to explain by words only: I shall therefore refer the reader to the Plates. Plate I. Fig. I. represents a skate, made after the English fashion, with some improvements; the proportions are as follows: Let the distance from the point of the fender, A, to the toe hook *, which is shewn by the pricked line, be one inch, and three quarters; B, the fort of the iron, whose lower surface is five sixteenths of an inch in breadth, and gradually increases

* This hook is made of the same piece with the skate iron; it goes into the stock at the toe, over the strap hole, to keep the iron and stock together.

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to five eighths of an inch, at the point of the fender; and from B, must gradually decrease to a bare quarter of an inch, at the heel D. C, the arch where the height of the iron is one inch three eighths; at B, one inch one eighth; and at D, one inch and a quarter: the groove that is cut in the stock, to receive the upper edge of the iron, is seldom made more than a quarter of an inch deep, so that the height of the iron from the stock will be at the arch one inch and one eighth, which is high enough for any sort of skating. E, the toe strap hole; F, the under strap hole; each of these holes must be cut so that the straps may go in very tight. G, the heel peg, whose diameter at bottom is a quarter of an inch, and at top one eighth; its height is determined by the heel of the shoe with which it is to be worn, but is seldom less than half an inch. H, the heel

heel screw, which should always be made short.

Fig. II. is a plan of a skate complete, with straps, &c. M, the heel of the stock, whose diameter is two inches and three eighths. G, the waist, whose diameter is one inch one eighth. L, the tread, which is two inches and seven eighths in breadth. The thickness of the stock is three quarters of an inch; but the surface of the tread must be depressed a quarter of an inch, that the ball of the foot may rest easy.

I. I. I. are little sharp points of iron, each of which projects from the stock about one eighth of an inch; the distance from the centre of the under strap hole, to the extremity of the heel, is two inches and a half; and from the centre of the heel peg, A, to the extremity of the heel, one
inch

inch one eighth; K, the under strap; P, the heel strap, N. N. rings to which the straps are sewed; the length of the under strap from ring to ring is five inches and a half, and the heel strap seven inches; the length of the toe strap is determined by the size of the foot, but it must always fit very tight in the stock.

N. B. These proportions are for a middle-sized foot.

I have said nothing on those skates whose surfaces are grooved, and are commonly called fluted skates, because I think their construction is so bad, that they are not fit to be used; in fact, they are so generally disapproved of, that I shall dispense with explaining their defects.

Of

Of the First Position.

Having fixed on the skates, according to any of the preceding methods, or in what manner you like best, place your heels together, with the toes inclining outwards; then lift up the left foot, without bending the instep, and put it down again in the same position, with your heel facing the ball of the right foot, at six inches distance; then with a small force throw your body forwards, bending the left knee a little more than in common walking; at the same time you throw yourself forwards, strengthen the right knee, so that you may press on the inside edge of the skate, and force yourself forwards on the left leg; this method must be observed with both legs, and is called a Stroke.

As

As it would be difficult for beginners to continue long on one leg ; which to attempt, they would get many falls ; therefore I would advise them, to make their strokes as short as possible.

There are, besides these instructions for managing the feet, others as necessary for the head and arms ; which in skating must cooperate with the legs. It is remarkable that learners throw their arms about carelessly, or in a wild manner, as if they were catching at something to prevent their falling ; which is the very means of throwing them down : the body being supported on so small a base as the edge of the skate, the poize is very difficult to attain, and I believe equal to that of walking on the tight rope, in which it is seen how essential the arms are,

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in

in preserving a proper balance ; on the same principle, the arms act in skating, serving as a counterpoise when they are moved ; and if they are not properly disposed, it will be impossible to stand, on either the out or inside edge, with any certainty. At first, the arms should be held out before, where they may be used to assist the body ; but if you throw one of them behind in going on, you will find it immediately retard your motion, as well as alter your intended course.

The head should also be held still ; but as that is rather difficult at first, you may move it from side to side as often as you change your feet, and let the eyes be fixed on the fender of the skate you are moving : in changing the feet in order to make a new stroke, the motion must not be the same as in walking, which is a thing
that

that often escapes young beginners ; who are often observed, when changing their feet, to bend the knee only, and lift their legs up too high behind them ; when on skates, we have not the power of rising on the toes, or of even bending the knee, as we do in walking, where we are obliged to rise ourselves upon the toes of one foot, in order to bring the other forward, without its touching the ground ; for want of making these observations, young beginners make no difference between skating and walking, in the use of their legs ; forgetting that they cannot bend the joints of their feet, nor rise on the toes, as they endeavour to do ; which causes their feet to slip up so suddenly behind, and which not only appears very awkward, but hinders them from performing any one stroke they attempt. With great pains indeed and long labour, many insensibly

arrive to a tolerable proficiency ; but this they might have acquired in half the time, with a very little trouble, had they received proper instructions at first.

As we have explained the difference between skating and walking, and proved that the feet cannot act in both alike ; it is proper next to teach in what manner you must act, to supply the place of bending the feet ; which may be done, by lifting the knees considerably higher than in walking ; and putting them down bent, and with a stiff instep (as before directed), so that the irons of the skate may always come down parallel to the ice ; which method must be followed on all occasions, with this difference only, that they are sometimes put down flat, and sometimes on their edges, according to the stroke intended.

The

The rules which I have here laid down, are much more necessary for grown persons than for youth: the latter, beginning with spirit and resolution, scramble on in a careless manner, not regarding a few falls, which seldom affect them: in grown persons, the case is different; their joints are not so pliable as easily to be bent into various positions; and whenever they fall, they come down with such violence as often proves fatal. The first position is nothing more than learning to stand firm on the ice; which having learned, you are properly prepared to proceed with the more agreeable part of the art; for the first position may be said to be only a preparative to skating, as turning out the toes is to dancing.

Of the Inside Edge.

As most people fall into this manner of skating before they attempt any other, I shall lay down some plain rules, by which it may be learned with ease and certainty in a very short time.

Let it then be remembered, that nature may be almost always improved; and that whatever contributes towards that improvement, ought not to be esteemed trifling or unnecessary: the inside edge is sometimes required, in performing some of the more difficult manœuvres; therefore it ought not to be forgot, nor neglected, as it is by many, when they have learned to go on the outside; not reflecting within themselves, that the perfection of every art depends on its first principles;

ciples ; and to attain true perfection, all its different branches must concur.

When you have learned to stand firm, and to move about, without falling ; the method of proceeding, in order to gain the inside edge, is this : supposing you would make a stroke with the right foot, you must, as soon as your foot sets off, lift up the left foot behind the right, with the toe inclining downwards, at about six or seven inches distance from the right heel, and with the fender two or three inches from the ice ; this position of the left leg, with the head at the same time turned to the left, the right arm a little bent, and held out on the right side nearly as high as the shoulder, and the left arm held still close to the side, will cause you to make a sweep to the left on the inside edge. This position

C 4 reversed,

reversed, will carry you with a sweep on the left leg to the right ; in going on the inside edge, keep the instep stiff, so as not to bend on either side ; your observing this attitude will always bring you on the inside edge, though you should begin the stroke on the flat. When you have practised these rules, so as to be able to keep your poize on the edge, and to make long and short strokes at pleasure, and with certainty ; you may next proceed to travelling, which we will next treat of,

Of * travelling on the Inside Edge.

Travelling on the inside edge is by no means pleasant, nor is it often practised by those who are further advanced in skating: yet it

* By travelling, is not meant going a journey, as the common use of the word seems to imply, but a term for a particular movement on the skates.

is sometimes necessary, to relieve, when we are tired of going on the outside edge; which, though an agreeable motion, and pleasing to the spectator, is fatiguing if continued long without changing to the inside.

It is amazing what relief is given, by changing from one edge to the other, in going a journey of forty or fifty miles, which is frequently done in Holland and many other countries; and sometimes twice that distance in one day. Perhaps some of our English skaters will despise learning the inside edge, because it is not a graceful attitude, and that they have no occasion to make such long journies; therefore would rather chuse to travel on the outside edge, as it is more pleasing

Tho'

Tho' these objections may be made, and perhaps appear reasonable to the unexperienced; yet, I would not advise any one to neglect making himself master of the inside edge, before he attempts proceeding any further; by the help of which, he will not only be able to roll sooner, but with more ease; because the finishing of every roll is on the inside edge.

That changing from one method of travelling to the other, must give relief, is obvious; and may be proved by any one action of our bodies, which, if continued to a certain time, becomes tiresome, the tone of the muscles and sinews being strained.

The reason why it is necessary, in skating, to alter our attitude pretty frequently, is, that every motion, being in *æquilibrio*, is consequently
more

more fatiguing than when we do not depend on so nice a poize.

Having theoretically proved the utility of travelling on the inside edge; I shall proceed with giving such instructions, as, if duly observed, any person may easily become master of the same. When you have made yourself perfect on the inside edge, and on both legs alike; begin to travel in this manner: Having put one foot down, to make a stroke, so far advanced, that the distance from the heel to the toe of the other foot be about twelve inches; set off on the flat of the skate, and gradually incline to the inside edge: we will suppose this stroke to be made on the right foot, with no other assistance than the pressure of the body; by this method, it would be impossible to travel fast; which to do, you must force yourself on with the other foot,

foot, as described in page 16; and directly upon the beginning of the stroke raise the left foot, about eight inches behind the right heel: this position must be continued till you change the stroke on the other leg; which must be done according to the preceding directions, reversed: a succession of these strokes, made alternately, will accelerate your motion, in proportion to the curves you form; and the distance of time, in going any determined distance, will be as the curvature of the lines of direction you move in: as curves thus made are indefinite, I shall not pretend to give any particular form of them; instead of which, let us describe a channel or road, in order to regulate the curves or sweeps in the best manner for expeditious travelling.

Sup-

Suppose a journey of ten miles, to be performed by two skaters, who shall move with equal velocity, one on a road six feet broad, which is described by the lines below, 1, 2, 3, 4, Fig. 3; and the other on a road eight feet broad, as described by the lines 5, 6, 7, 8, Fig. 4.

Fig. 3.

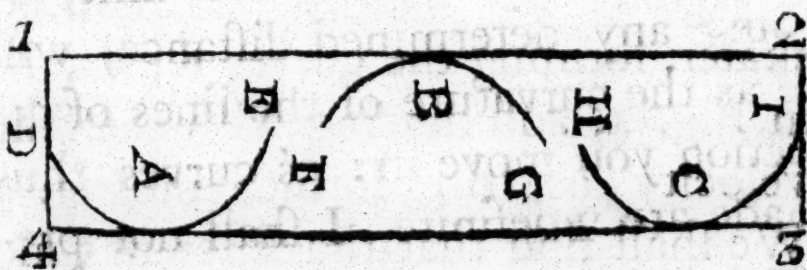
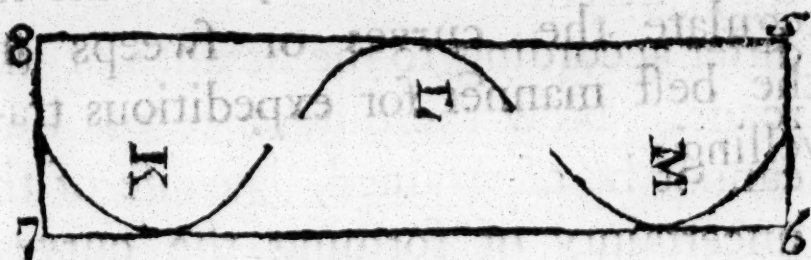


Fig. 4.



In

In figure 3, the curve lines A, B, C, represent the lines of direction; A, a stroke made on the right foot, from D to E; B, the second stroke on the left foot, from F to G; C, the third on the right foot, from H to I: in this manner the curves are formed, between the lines 1, 2, 3, 4, alternately, from one foot to the other.

Again, we will suppose another skater, forming the curves K, L, M, in Fig. 4; and moving with the same velocity as the former in Fig. 3. We shall find that the different times of performing their journey will be as the length and flexure of the curves they describe, which curves will differ according to the breadth of the roads. Now the difference of time cannot be ascertained, because of the uncertainty of forming the curves: yet I think that the figures already de-

described, give sufficient proof, that the traveller in the road of six feet broad will arrive at his journey's end a considerable time before the other in the road of eight feet broad. Although what has been said may be conceived on first sight of the figures, and any further demonstration dispensed with; yet, according to the rules of art, we must proceed, in a regular manner, to prove the most trifling proposition.

It would be somewhat difficult for any one to know, when he is travelling, whether he makes his road six or eight feet broad, the breadth being intirely imaginary: but let this rule be observed; which is, always to make the sweeps as straight as possible, the more so the better; and the more direct the course, the less will be the resistance and friction; which suf-

ficiently proves that narrow roads are best.

In travelling on the inside edge, the head and arms are not to be used in the same manner as in beginning to skate. The manner in which they should be employed may easily be conceived, being no other than that position in which they are held at the beginning of a minuet, only that the arms should be a little more advanced; and if they are suffered to hang with freedom, their motions will be governed by those of the body, which I think is the most graceful way they can be employed: the head must incline from side to side, gradually, as the stroke is changed, always looking forward to the way you are going.

The above instructions, followed with attention, added to a little practice, will soon make every motion

tion become easy and familiar, and to seem in a manner natural.

Of the Outside Edge.

Young beginners will be a little surprized, when they find they have not yet come to that movement, which appears so agreeable to the eye, and which they are all so ambitious of attaining; and imagine, by the preceding instructions, that there is more difficulty in their way than they are aware: but they may be assured, that it will be easier in practice than it appears in theory.

I hope what has been said, will give the reader sufficient encouragement, to attend with patience to the following instructions; which, when put in practice, will give full

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fatis-

satisfaction for the disagreeable time spent in learning the first principles.

To preserve the balance on the outside edge, requires more skill than any of the former positions; and is so difficult to be acquired, that I have known many to spend three or four winters in learning it. This I can impute to no other cause than their not having pursued a proper method at first setting out. It is common for those who first attempt moving on the outside edge, to inquire of others, in what manner they must begin; and upon not finding themselves immediately succeed, attribute it to the fault of their advisers; and apply to some others, for different instructions: these instructions being generally different, and the learner not having a proper perseverance to continue his attempts, but continually changing from one method

method to another ; is the reason we see so very few arrive at any perfection, on the outside edge.

To prevent these disappointments, I will lay down one general rule, which I have never known to fail, even with those who at first seem the most awkward.

Suppose a stroke to be made on the left leg ; it must be put down on the flat, with the knee bent, the head inclined to the left, the right arm held out nearly upon a line with the shoulder ; and the left arm held close to the side : then, with the right foot, impel yourself to the left, by often pressing the inside edge of the skate on the ice ; the left foot is not to be taken off : by this method, you will make a sweep, which you must endeavour to increase, by inclining the body to the left ; and bearing on the outside

edge of the skate, and by gradually increasing your inclination, and turning the head more and more to the left shoulder, you will form a spiral line: this method must be reversed, for the right leg; and if practised for two or three days, the outside edge may be acquired.

The impellent foot being wholly employed at first learning the outside, no regard is paid to its position during the intervals of each stroke: but when the outside is acquired, it must then be thus disposed of. Suppose a stroke to be made on the left leg, raise the right leg behind, by bending the knee only; which knee must not be more than three or four inches from the left ham, and the foot hung in an easy manner, with the toe downwards, within two or three inches of the ice.

When

When you can follow this method with both legs, and change the position of the arms with the stroke, you will then be prepared for travelling ; which I shall treat of next.

Of travelling on the Outside Edge.

This sort of travelling is thought to be more pleasing and expeditious than any other : it is the method which the Dutch chiefly make use of, in performing their long journies, sometimes with heavy loads balanced upon their heads.

They travel on the outside edge, with their hands in their side pockets ; this position of the arms I would recommend, as the most easy : but for expedition, they must be held forwards, and used occasionally to assist the motion ; in what

particular manner they are to be employed on such occasions, experience will teach best ; for most people differ in the manner of using their arms when going fast on the ice, as they do when running on the ground ; to strike on the outside edge, has already been taught ; but to travel on the outside, you must make strokes alternately with both legs : and at every stroke, let the impellent foot be held, nearly parallel to the other, at about twelve inches distance, for about two or three paces ; and then brought up suddenly to the other, in order to make a new stroke ; the faster you would go, the farther the foot must be advanced in taking the strokes ; but to move slowly and gracefully, it must be put down, with the heel at a little distance from the toe of the other foot.

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The head is governed by the changing of the legs, and must be gradually moved from side to side, so that you may always look in the same direction with the curve you make; to be more explicit, the whole body and head must be inclined alternately from one side to the other, with as much ease and regularity as possible. When all these motions become familiar, travelling at a moderate rate will not be in the least fatiguing.

To travel very fast, the strokes must be made as short, and the curves as nearly approaching to right lines, as possible.

Of the Curved Line on the Outside
Edge, called Rolling.

This sort of skating, performed by a person of a genteel figure, is the most graceful and becoming movement of all others; and must appear to those who neither consider, nor understand, the reason of the body's being preserved so long in a falling state, as it were somewhat amazing: but, if mechanically considered, it may easily be conceived, with this allowance, that nature here, as well as on many occasions, acts in a manner that cannot be intirely reduced to mechanical principles. This may be proved, by supposing a figure of a man, made of wood; and that the centre of gravity in such a figure was in the same point as it is said to be in the human body; in which it is situated in the middle between
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the two hips, or in that part called the Pelvis. Now suppose the figure to stand erect, with the feet placed parallel to each other, within a square of twelve inches; then, if a perpendicular be let fall from the centre of gravity, it will meet the ground nearly in the middle of the square: but if the body be inclined any way, so that the perpendicular should not touch the ground in the centre of the square, the figure will immediately fall, even supposing the limbs moveable, and placed in the best manner for preserving the poize: in the human body the case is different; which I have found by experience, that a man may stand, though he be so inclined, that the perpendicular should fall at the toes (provided he has the proper use of his limbs). I can assign no other reason for his being capable of supporting himself in such an attitude, than the wonderful
con-

construction, and manner of acting of the muscles.

By the preceding remarks, as well as by the following instructions, we shall find that skating manœuvres are mechanically performed; rolling, ought not to be learned in a hurry, nor with both legs, till you are perfect on one; and it is difficult to roll well, after you have contracted a bad habit, which is always the consequence of learning too soon on both legs. This I have observed in many, who, though they were firm on their skates, could not move equally well on both legs.

Rolling must be learned in this manner. Take a step with the left foot, putting it down flat, at about ten inches from the ball of the right foot; and let the toe be turned pretty much out: incline the body forwards,

and the head to the left, directing the eyes that way ; let the arms be easily crossed over the breast ; some chuse to let them hang down at their sides, and others put them behind their backs : both these methods are straining, and not graceful.

At setting off, the left knee must be a little bent, and gradually straightened, as you move, till it is quite straight ; which it must be at the end of the curve. The right leg must be slowly raised behind, with the toe out, and pointing downwards : this leg serves as a counterpoize to the inclining body ; when you have made about half the sweep, bring the right leg slowly forward, in order to take another stroke, in the same manner as with the left, only that the motions and positions must be reversed ; in rolling fast, you must force yourself on with the impellent

pellent foot: but for slow rolling, the inclination of the body will be sufficient; to what height the leg is to be raised behind, cannot be determined, that depending intirely on the size of the curve; that is, the larger the curve, the higher the leg must be raised: but in common rolling, the toe need not be above three or four inches from the ice. The figure in the second plate represents a proper attitude for genteel rolling.

Of Running.

Running is absolutely necessary in performing some of the masterly parts of this art ; without which, it would be impossible to make the movements sufficiently large ; any tolerable skater could run, were he not afraid of falling ; which most are, because such sort of skating appears wild and dangerous ; and indeed is so in those who attempt running in the same manner as on the ground. That those who choose to be masters of such manœuvres as are facilitated by running, may not be discouraged in their attempts ; I will give such instructions, that they may venture without danger of falling.

It may be observed of skaters in general, who attempt to run, that,
instead

instead of doing so, they rather keep sliding along, with their feet nearly parallel, and often fall: the cause of their falling is, that they cannot stop the foremost foot, in order to take a step with the other; for the skate, moving forward in a right line, can have no hold on the ice, to check the motion; so that when the other foot is brought forward, that on which you are moving immediately slips back. The principal intent of running, is to add to the force of the body. Whenever we are desirous to make a very large roll or circle, &c. in the same manner as in leaping on the ground; we find ourselves assisted by running; but the above described method of doing this would not assist the velocity of the body, because, the skates having no hold of the ice (as was before observed), it would be difficult to stop,
so

so as to make a spring, at the beginning of any manœuvre. If the following method be observed by a good skater, he may run as firm, and leap nearly as high with skates as without. In running, take short steps, turn out the toes, as much as you can with ease, and bring down each foot on the inside edge; at every step, strike on the ice, in the same manner as if you were stamping on the ground, and let the heel of the iron touch the ice first; the arms must be used as they are in running on the ground, the body inclined forwards, the head kept still, and the eyes fixed on the spot where you intend setting off with the spiral line, circle, &c.

Many accidents happen upon the ice, from the skaters running violently against each other; which is only to be prevented by learning the method

thod of stopping themselves suddenly. This, after they have acquired the art of running, may be easily done, by leaping up, and coming down with the feet parallel, at about twelve inches asunder, and turned as much as possible to the right or left; so that according to the seaman's phrase, the broad sides of the skates may be before you: when travelling, you may stop yourself, by only turning the feet to the right or left, as before described, and pressing on the inside edge of the foremost foot. By these methods you may avoid many dangers, such as banks of snow, broken ice, &c. But the method which skaters generally make use of to stop themselves, is by no means so certain; for as they only bear on the heels of their skates, they run a considerable distance before they stop, by which means they not only
spoil

spoil the ice, but often break their skates; and, unless they perceive the danger at some distance, are not able to escape it.

SECTION II.

Of the Spiral Line.

IN the preceding part of this work, I have endeavoured to lay down proper instructions, for plain skating, and graceful rolling; and shall now treat of the more masterly parts of this art, which cannot be attained by those who are not naturally active, and possessed of some genius. It is rather difficult to form a spiral line, and at first learning is generally attended with some falls, owing to the great inclination of the body; but more frequently to the skates having a dull edge.

To form a large spiral line, take a run about thirty yards; and when you begin the line, throw yourself

with great force on the left leg on the outside edge, the knee bent, and the body inclining forwards as much as possible ; the arms must be held in the same position as an archer is described drawing his bow ; the right leg raised behind as high as you can with ease, with the knee bent so much, that, as you look over the left shoulder, you may see the foot ; as you proceed gradually, raise the body, and drop the right leg, so that, when you finish the line, the body may be upright, and the legs brought together ; then take a small roll on the right leg ; but before you begin, drop the left hand on the hip, and advance the right higher than the head, keeping your eyes fixed upon it at the same time ; this attitude has a pretty effect at the conclusion of the spiral line.

. Of the Inside Circle.

The inside circle is the largest manœuvre on the skates: it is necessary to be learned, because it teaches the method of turning out the toes; without which many other movements could not be done: the circle is thus performed; first take a run; then spring off on both legs, on the inside edges, with the right foot first, turning yourself to the left; let the feet be in a line with the body, and the distance from heel to heel about eighteen inches; the feet must be turned so much out, that the skates may make but one track on the ice; bear full on the right foot, but raise the heel of the left skate a little, to prevent its catching in the ice, and tripping you up; at first setting off, stoop, bend the knees, and look to the right: but as you go on, raise yourself slowly, and straighten the knees

knees till you come quite upright ; the heels must be gradually brought together, and the head turned by degrees to the left : the hands may be disposed of any way, so that they are kept still ; it is to be observed, that the larger you intend the circle, the longer you must look to the right ; and the less the circle, the sooner you must look to the left.

If you would form a scroll or spiral line, instead of a circle, you must, at setting off, place the left foot, so that it may cut a track about four inches behind the right ; and when you have gone a little way, bring the head to the left, and look down at the left foot : by this method you may cut a compleat scroll ; at coming near the end of it, shrink in the body, and raise the shoulders, which will give you a short and sudden turn. The circle

and scroll may be done equally as well to the right, by reversing all the motions.

Of the Outside Circle.

I have seen but few who were capable of making this circle: the reason of which is, that it is both difficult and straining; but if once learned, you will then have such command of your skates, that hardly any jerk, or irregular motion, will throw you off your balance.

As the performing of this circle is difficult, and requires much practice, it is better at first not to attempt to make it either compleat or large: but begin by throwing yourself on both feet, on the outside edges, with the right foot first; let the force be just sufficient to carry you a few yards, at the same time making a full face
to

to the left: both feet must be turned out so much that the toes may be a little farther back than the heels; let the space between the heels be about two feet; look to the right, quite over the shoulder; stoop, and bend the knees; keep on the outside edges, but raise the left heel a little; the left foot must not run in the same track with the right, but must be two or three inches advanced; the best position for the arms is, to hang them in an easy manner before you; if, after making some tryals, you can move a few yards on the outside curve, you may then attempt to make a large circle; which may be done by taking a run, to accelerate the motion.

A scroll may be cut, instead of a circle, by looking more over the right shoulder, and advancing the

left foot farther than in making the circle,

Of the Flying Mercury.

After any one is master of the preceding manœuvres, he will find all the others to be very easy : as for example, to perform the attitude of a flying Mercury, is nothing more than the spiral line, except that the arms are not employed in the same manner; the figure in Plate III, represents the attitude on the right leg, and almost at the conclusion of the stroke; but at the beginning the body must lean forwards pretty much, with the right hand pointing to the ice, and slowly raised with the body, till you are quite upright; when you would finish the stroke, bring down the left leg, and throw it suddenly up before you, at the same time bearing on the right heel; by which means
you

you may spin round two or three times, in order to conclude the spiral line, which should always be formed when in the attitude of Mercury.

Of the Fencing Position.

This position, though pleasing to the eye, is somewhat difficult to perform; the manner of doing it is this: when you have taken a sufficient run to increase the velocity of the body, throw your feet in a right line on the flat of both skates, with the right foot first; raise the left heel a little up, but tread flat on the right foot; the right arm must be held out nearly in a line with the shoulder, and the eyes fixed on the fingers of that hand: the body must be held as upright as possible, the breast held out, and the head back: all these positions must be well observed; otherwise it will be impossible to move in a right line, or to keep your balance. This attitude is represented by the figure in the fourth Plate.

Of

Of the Salutation.

This is a manœuvre that cannot be exhibited, unless the performers skate equally well, and are masters of the inside circle, and rolling.

Suppose two skaters standing opposite each other, at about twenty feet asunder; then let them both make a sweep on their right legs, till they come near enough together to join their right hands, keeping them no longer joined than while they pass one another; when they must immediately turn themselves on their right feet, and strike off with an inside circle to the left, drawing their right legs in the same manner as in making a bow at the beginning of a minuet: at commencing the circle, the hat must be pulled off, and held down during the bow, which may be

be made according to fancy ; at the conclusion of the bow, both must turn suddenly round on the left leg, which may be easily done by throwing the right leg up to the left ; when, turning, the hats must be put on : by thus turning round, they will come face to face, as at first setting off.

Of the Serpentine Line.

The serpentine line may be made either on one leg, or both ; the method of forming it on one leg is this : take a short run, to assist your motion ; then strike off on the right leg, holding the right arm out in a line with the shoulder, the left leg up behind as in common rolling : the left arm may hang down at the side ; at first setting out, make a curve to the right, but make it as straight as you can ; when you have gone a few yards,

yards, turn your head to the left, and bear on the inside edge; bring the left foot forward, and turn the right arm to the left: keep in this position till you choose to go again to the right, which may be done by changing the attitude to the same as at first setting off. By this method a serpentine line may be formed, as long as you can continue your course on one leg.

To form a serpentine line on both legs, set off in the same manner as in making the inside circle; then change to the position for the outside circle; thus changing from one to the other, a serpentine line may be formed, more or less curved, according to the fancy.

N. B. The arms must be held in the same manner as in the fencing attitude.

These

These manœuvres plainly prove what I before said, that the perfection of every art depends upon its first principles ; for in these are used almost all the positions before taught.

Of travelling Backwards.

To travel backwards, is rather a whimsical movement than either necessary or pleasant : but as there may be some who wish to attempt it, I will lay down the plainest instructions for it in my power. To make a stroke on the left leg, turn in the toe of the right foot ; and press on the inside edge, to force yourself backwards ; and lean forwards as much as you can ; the same method must be followed for the other foot : this movement requires a great deal of practice ; but when once you have learned the method of making the strokes,

strokes, you will be able to go at a great rate.

To cut the Figure of a Heart on one Leg.

This is a pleasing manœuvre, and but lately known; it is difficult, though graceful if well done; the method is as follows: first set off, with a sweep on the outside, on the right leg; and when you think you have formed half the figure of a heart, which you will almost naturally do in common rolling, turn yourself suddenly half round; then throw yourself on the inside edge, and by looking to the right you will move backwards. This motion must be continued till you come to the place where you began the heart; it would be rather difficult to describe in what manner the arms should be used, nor is it necessary, because those who
are

are such proficientes as to attempt this manœuvre, will certainly know how to employ them.

There are many other movements performed on skates, besides those I have treated of; but, as they are neither graceful nor pleasing, I shall here conclude, by saying, those who can perform all the manœuvres mentioned in this treatise, will have no occasion for any further instructions.

F I N I S.





Darling f.c.



W. Darling scul.



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